



King's Research Portal

DOI:

[10.1111/gove.12411](https://doi.org/10.1111/gove.12411)

Document Version

Publisher's PDF, also known as Version of record

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Rothstein, H., Paul, R., & Demeritt, D. (2020). The Boundary Conditions for Regulation: Welfare Systems, State Traditions and the Varied Governance of Work Safety in Europe . *Governance*, 33(1), 21-39.

<https://doi.org/10.1111/gove.12411>

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

SPECIAL ISSUE

The boundary conditions for regulation: Welfare systems, state traditions, and the varied governance of work safety in Europe

Henry Rothstein¹ | Regine Paul² | David Demeritt¹

¹King's College London

²Kassel University

Funding information

Economic and Social Research Council, Grant/Award Number: ES/K006169/1; Deutsche Forschungsgemeinschaft; Agence Nationale de la Recherche; Economic and Social Research Council

Studies of the relationship between the welfare and regulatory state have hitherto either focused on the latter displacing the former, or presented regulation as an alternative means for achieving welfare goals. Little is known, however, about their varied mutual interactions. This article addresses that gap by examining the coevolution of workers' compensation and occupational safety regulation in Germany, France, the United Kingdom, and the Netherlands. Drawing on an extensive international analysis of primary documents, secondary literature, and interviews with regulator, insurance, business, and labor representatives, the article identifies strikingly varied but stable national preferences for: (a) the use of financial versus regulatory instruments and (b) the allocation of regulatory responsibilities between state and nonstate actors. The article presents a novel explanation of that variation as dependent on the relative coherence of interactions between the particular cost-control logics of welfare provision and wider norms and traditions of state action in each country.

1 | INTRODUCTION

Celebrating the 125th anniversary of Bismarck establishing the world's first statutory system for workers' compensation, the DGUV—the umbrella organization for Public Accident Insurers in Germany—highlighted how much this cornerstone of Germany's welfare state depends on preventative regulation: “Successes in accident prevention are crucial to ensuring the financial stability of the social insurance system” (DGUV, 2010, p. 12). This Bismarckian model of welfare provision through sectorally organized social insurance funds has been widely emulated (Parsons, 2002), but its success,

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2020 The Authors. *Governance* published by Wiley Periodicals, Inc.

as the DGUV argues, depends on the underlying “unity” of preventative regulation with welfare compensation. This unity is essential because effective regulation is key not only to avoiding work-related harm but also to containing welfare costs and ensuring the economic competitiveness of an advanced capitalist society.

While it is well recognized that other welfare states are organized differently, it is less clear whether this variety in welfare state models can help explain long-recognized differences in national regulatory style (Vogel, 1986). Is the described unity of preventative regulation and fiscal compensation in the German case distinctive to Bismarckian welfare states? To what extent might alternative welfare state models promote different styles of regulation? These questions about the interdependence of welfare and regulation have hitherto received little attention in either the welfare state or regulatory state literatures. Although a few comparative welfare state scholars have used regulatory form as an indicator for distinguishing alternative models of welfare state provision (Emmenegger, 2011; Leisering, 2011a; Reibling, 2010), most comparative social policy research has analyzed variable welfare provision without considering its implications for the organization of regulation (e.g., Castles, Leibfried, Lewis, Obinger, & Pierson, 2010). By the same token, scholars of regulation have tended to overlook the structure of the welfare state as a potential factor shaping national differences in instrument preferences or reliance on subsidiarity and coregulation. Thus, extensive debates about the well-recognized differences between Anglo-Saxon and Continental European states' use of market-based regulatory instruments have paid little attention to whether these differences in regulatory style might reflect, or even be shaped by, differences in their respective welfare state arrangements (Bailey, 2007; Meckling & Jenner, 2016).

Responding to recent calls for rapprochement between hitherto largely separate literatures on the “regulatory” and “welfare” state (Haber, 2017; Levi-Faur, 2014), this article explores the role of national welfare state arrangements as an “institutional input” variable (Guidi, Guardiancich, & Levi-Faur, 2020) shaping both the organization of regulatory systems and their preferred instruments for ensuring compliance, that is, “regulatory outputs.” To that end, it examines occupational health and safety (OHS) regulation and its relationship to variable arrangements for workers' compensation from a historical institutionalist perspective (Mahoney & Thelen, 2015). Rather than focusing on often short-lived political coalitions and their influence on policy change, the historical institutionalist perspective exposes the long-term patterns of regulation and compensation in different countries and their potentially complementary logics of interaction since the formative period of OHS policies. Some have called workers' compensation the “prelude to the welfare state” (Fishback, 2000), but in many ways it also marked the beginning of the regulatory state. At the end of the 19th century, regimes for protecting workers against occupational injury through preventative regulation emerged simultaneously across the industrializing economies of Europe and North America alongside parallel welfare regimes for providing social security payments to compensate for injuries and death (Hennock, 2007; Mares, 2003). This coevolution makes OHS a crucial case for examining what Levi-Faur (2014) has called the “regulatory welfare state” in which redistributive fiscal transfer regimes condition, and are conditioned by, associated regulatory regimes.

To assess these potential interdependencies, the article starts by reviewing alternative approaches to conceptualizing the relationship between the welfare state and the regulatory state and develops hypotheses about how preventative regulation might vary across countries with different welfare state arrangements. It then compares the institutional coevolution of OHS regulation and workers' compensation across a purposefully selected sample of four advanced EU member state economies with differing models of welfare provision: the United Kingdom, Germany, France, and the Netherlands. The article finishes by discussing its implications for

deeper understanding of the relationship between the regulatory state and the welfare state from a comparative political economy perspective.

2 | REGULATION AND ITS RELATIONSHIPS TO THE WELFARE STATE

To date there have been only limited engagements between the large comparative literatures on the regulatory state and the welfare state. One classic approach to conceptualizing the “regulatory state” sees it emerging from the eclipse of the welfare state and an associated shift in the logic of governance from one based on “rowing” and direct service provision by the state to “steering” through regulation and indirect forms of directing the economy and society through contractual instruments, market-based incentives, and arms-length rule making and oversight (Moran, 2002; Rhodes, 1996). Majone's (1994, 1997) influential analysis points to how “the beneficent role of the positive state—as planner, direct producer of goods and services, and employer of last resort—began to crumble in the 1970s” (Majone, 1997, p. 141) in favor of new strategies based on economic liberalization, privatization of state-owned enterprises, delivery of public services through quasi-markets, and reforms to tax and redistributive welfare. But far from rolling back the state, these reforms were accompanied by “an impressive growth of regulatory policy-making both at national and European levels” driven by the same “processes that have contributed to the decline of the positive state” (Majone, 1997, p. 143).

Challenging the idea of the regulatory state simply displacing the welfare state, others have highlighted the potential for regulation to serve as an equivalent form of public welfare provision. Levi-Faur (2014) coins the term “regulatory welfare state” to capture this functional equivalence, insofar as regulatory instruments of rule making and enforcement can have redistributive purposes that substitute for fiscal redistributions classically associated with the welfare state. For example, he points out how the policy goal of affordable rented accommodation can be served both through conventional fiscal transfers in the form of housing benefits to compensate for low incomes and through regulatory controls on high rents. Haber (2011) offers another example of functional equivalence in the electricity sector, showing how Sweden uses regulation solely to ensure market competition while helping poor customers through the social benefit system, but the United Kingdom—with its more residual welfare arrangements—relies more heavily on regulating “social tariffs” for vulnerable consumers. Indeed, Mabbett (2010) argues that the regulatory state might potentially come “to the rescue” of the welfare state in times of austerity by achieving redistributive goals through functionally equivalent forms of regulation rather than direct public expenditure.

While the above studies implicitly hint at variation in political economy, comparative welfare state research has only recently started examining the relationship between regulatory variation and wider welfare state arrangements. Comparative accounts of welfare state traditions (e.g., Esping-Andersen, 1990; Schröder, 2013) have highlighted how variation in social policy provision reflects different ideas about the respective role of state versus market actors in combatting social ills. For example, while liberal welfare regimes rely on universal (Beveridgean) but residual welfare payments to compensate for market failure, “conservative” welfare traditions prefer status-maintaining Bismarckian social insurance arrangements, and “social-democratic” regimes use generous universal benefits to increase social equality. Scholars argue that those distinctive ideas explain the varied regulatory arrangements that have accompanied the widespread privatization and marketization of social security provision in Europe (Ebbinghaus, 2015; Leisering, 2011a). For example, the private pension market in the U.K.'s liberal welfare state is larger but more highly regulated than in Germany's conservative welfare state, which continues to rely widely on public and occupational old-age insurance schemes (Leisering, 2011b). Similarly, long-established conceits of welfare states help explain the varied regulation of “activation”

services across Europe (van Berkel, de Graaf, & Sirovátka, 2011a, 2011b). Thus, while the British Liberal-residual welfare state has created regulatory frameworks to manage competition between its state-run “Jobcentre Plus” and private activation services, Dutch local welfare agencies—in a context of stronger trust in state provision—“decide what services are being outsourced, so that they do not compete with market actors” (van Berkel, de Graaf, & Sirovátka, 2011b, p. 244).

The assumption that institutions are broadly stable—determining which actors matter, how they conceive of their interests, and hence structuring their political strategies and policy choices—is widespread in comparative political economy and welfare state research (Steinmo, Thelen, & Longstreth, 1992; Mahoney & Thelen, 2015; cf. Pontusson, 1995). Historical institutionalist explanations, however, have been critiqued for a lack of engagement with agency and resulted in calls for a “greater theoretical and empirical attention to the politics of path dependency” within the historical institutionalist paradigm (Peters, Pierre, & King, 2005, p. 1297). Political coalitions between social partners and specific parties, for example, are deemed more capable of explaining both the origin of institutions and institutional change (Peters et al., 2005; Pontusson, 1995). In the field of OHS, for example, both Hennock (2007) and Mares (2003) highlight how specific combinations of actors and their power struggles helped setting up workers’ compensation in the late 19th century in Western European countries. Yet, our analytical focus is not on the origins of institutions or on short-term policy change. Rather, our contribution is to the debate about varieties of regulatory capitalism (see contributions in this special issue) by identifying and explaining relatively stable logics of interaction between prevention and compensation in the regulatory and the welfare state.

Historical institutionalist work in comparative political economy points to potential complementarities between regulation and forms of welfare provision across different political economy contexts. This claim is consistent with the Varieties of Capitalism (VoC) literature, which, *inter alia*, argues that labor market regulation and welfare provision play institutionally complementary roles within wider capitalist coordination regimes (Hall & Soskice, 2001). Thus, coordinated market economies are argued to favor strong labor market protections and generous welfare systems (i.e., Bismarckian social insurance) to protect investments in their highly skilled and specialized workforces, while liberal market economies are said to favor weaker labor market regulation and residual welfare systems because their competitiveness requires labor market flexibility (Estevez-Abe, Iversen, & Soskice, 2001; Hay & Wincott, 2012; Mares, 2001).

The law and economics literature also assumes potential complementarities between welfare systems and regulation, albeit from a different perspective. Its focus on the role of legal systems in promoting the efficient allocation of resources (Posner, 1975) highlights how variable welfare state arrangements may shape the organization and instrument preferences of associated regulation. Thus, how countries strike a balance between *ex ante* regulatory controls and *ex post* payouts raises important questions of efficiency, given that too much focus on limiting payouts may result in overregulation, while too much focus on limiting regulatory intervention may result in ballooning payouts. Optimizing that balance can, in turn, depend on instrument choice, be it tort, insurance, or command and control regulation, each of which suffers from well-known constraints, such as victim access to tort, targeting of insurance premiums, and the adequacy of regulatory rules. Likewise, optimal balances are likely to depend on the organization of regulatory and welfare responsibilities, given public choice style arguments that the most effective and efficient means of reducing moral hazard is by ensuring that those bearing the costs of risk are also responsible for regulation (Philipsen, 2009).

In different ways, these literatures suggest that the organization and instrument preferences of regulation may be sensitive to the cost-control concerns of different welfare states. For example, generalizing the DGUV’s claims of necessary “unity” between preventative regulation and welfare compensation, we might hypothesize that in conservative welfare states with Bismarckian compensation schemes, strong

coordination between preventative regulation and insurance premiums and payouts is functionally desirable to ensure the financial viability of their hypothecated social insurance funds. By contrast, liberal welfare states with Beveridgean provision schemes have less reason to regard regulation as a cost-control lever and in need of coordination with welfare compensation because their benefits are funded through general taxation and so residualization, rather the internalization, is the principal means of cost control.

The discussions, so far, suggest the emergence of different, and mutually economically efficient, relationships between the compensation logics of different welfare state models and preventative regulation. At the same time, however, regulatory scholarship has long pointed to the existence of widely varying national “regulatory styles”—broadly speaking, the “who does what and how” of regulation—that are embedded within nationally distinctive and deeply entrenched state traditions, comprising a complex mix of ideas about the role of the state vis-à-vis market and societal actors, legal constraints and traditions, and public administration architectures and practices (Adam, Hurka, & Knill, 2017; Brickman et al., 1985; Kagan, 2000; Kelman, 1981; Vogel, 1986; Vogel & Kagan, 2004). That raises the issue of how the *economic* logics of cost-control requirements in different welfare states interact with the *political* logics of wider state traditions in shaping the organization and instrument preferences of regulation. Do they always have a functional fit or do they ever conflict and with what consequences?

For example, while some state traditions prefer to vest regulatory authority in the central state executive (e.g., France), others favor subsidiarity by delegating authority to nonstate actors (e.g., Germany and the Netherlands). Some state traditions constrain regulatory action through constitutions that emphasize negative rights against state interference (e.g., Germany and United States) or positive rights to state protection (e.g., France), while other state traditions that are unencumbered by written constitutions take a more ad hoc approach to regulatory action (e.g., United Kingdom). Some state traditions favor modes of regulatory decision making and enforcement that are formal and adversarial (e.g., United States), while other traditions are more informal and consensual (e.g., Netherlands).

That literature suggests that the “unity” celebrated by the German social insurance bodies may be the result of a functional institutional fit between the cost-control logics of the Bismarckian system of welfare provision that favors strong coordination between preventative regulation and compensation arrangements and a German regulatory style that, in favoring subsidiarity to nonstate actors, can facilitate such coordination. We might likewise hypothesize—as we will explore later—that there is potential for a different type of fit in the British case, where the cost-control logics of its Beveridgean compensation approach do not depend on an ad hoc regulatory style for which welfare cost-control is simply a happy consequence of case-by-case attempts to address market failure. Such functional complementarities between welfare provision and regulation, however, are less likely to prevail in countries where the cost-control logics of their welfare states might be expected to depend on regulatory interventions that conflict with their regulatory state traditions.

3 | COMPARATIVE CASE STUDY DESIGN AND METHODS

To explore the extent to which welfare state arrangements and their relatively (in)coherent interaction with variable state traditions shape regulatory organization and instrument preferences, this article compares the evolution of, and interactions between, workers' compensation and OHS regulation across four advanced European countries: Germany, the United Kingdom, France, and the Netherlands.

Germany and the United Kingdom provide opposing cases of Bismarckian and Beveridgean systems of welfare provision. While Germany abolished employer liability in favor of a generous

Bismarckian compensation scheme, the United Kingdom retained employer liability to supplement taxpayer-funded universal health care and social security benefits (Gal, 2004; Kangas, 2010; Parsons, 2002). France and the Netherlands also originally opted for variants of Bismarckian social insurance, but France incorporated its regime into the Social Security system after World War II (WWII), with a stronger role for the dirigiste state (see later), while the Netherlands has gone further toward more universal and integrated provision over recent decades, which increasingly leans toward a Beveridgean provision approach (Schröder, 2013, p. 133f).

The four countries also vary in their wider state norms and traditions of regulatory action (Rothstein, Borraz, & Huber, 2013). Germany's Rechtsstaat and federal structure strongly constrain state regulatory action and favor delegation to corporatist nonstate actors, while the United Kingdom's tradition of parliamentary sovereignty in the absence of a written constitution favors a more ad hoc approach to regulatory action. The French Republican tradition venerates the dirigiste state, identifying it with the general interest and charging it with the leading role in all aspects of regulation. By contrast, the Dutch polder model of consociational decision making favors procedural solutions that are founded on agreement among, and often delegating authority to, the social partners.

Empirically, the article uses qualitative methods of comparative case study analysis involving triangulation between an extensive set of primary documents ($n = 98$), secondary and historical literature reviews, and a corpus of background interviews ($n = 42$) with contemporary key regulators and experts from insurance and professional associations, business and labor representatives. These expert interviews were used for cross-validation of findings from document analysis¹ and literature reviews covering the long span of historical analysis from the inception of OHS regulation and workers' compensation in the late 19th century to the present. Having started our comparative analysis from a clear theoretical problematization, we used an inductive approach to explore the evolution of OHS regulation and its interaction with the logics of welfare compensation and wider state traditions.

4 | THE COEVOLUTION OF OCCUPATIONAL HEALTH AND SAFETY REGULATION AND WORKERS' COMPENSATION

Until the second half of the 19th century, all four countries relied on a classically liberal approach to regulating OHS (Guyton, 1999). Workers and their employers were, in principle, free to bargain over safety provisions as part of their contractual negotiations, but in practice workers were at the mercy of their employers and tort suits were difficult to win. With the industrial revolution making workplace accidents more grievous and developments in tort making them costlier, all four countries moved, within a few decades of one another in the late 19th century, to establish regulatory regimes to prevent occupational injuries alongside welfare systems to compensate injuries and provide social security for widows, orphans, and invalids. OHS regulation in all four countries involved different balances between statutory and private rule making, as well as between the use of legal sanctions and financial, chiefly insurance-based, instruments for ensuring regulatory compliance. The following section describes the history of these regulatory “outputs” and their relationship to systems of workers compensation and welfare provision in each country.

4.1 | Germany

Germany takes a so-called “dual-system” approach to OHS regulation, based on para-public regulation and inspection by an interventionist social insurance regime backed by broadly enabling

statutory regulation and residual enforcement by generalist Länder labor inspectorates. The modern regulatory regime dates back to the 1891 Industrial Code, which set out employers' broad obligations to protect workers against dangers to life and health (Wank, 1992). However, this general duty was not judiciable (Hennock, 2007, p. 131). Indeed, with a few exceptions, the German legal code contained almost no statutory OHS standards until the EU Framework Directive (89/391/EEC) was transposed in 1996. Instead, the state has long delegated the elaboration of detailed safety rules to the social insurance system.

Established by the 1884 Industrial Insurance Act, the German social insurance system abolished the civil liability of employers in favor of a strict no-fault liability scheme of tabulated compensation for all income and medical costs of work-related injuries, illness, and death (Hennock, 2007; Simons, 1984). The scheme has since been administered by the *Berufsgenossenschaften* (BGs), a set of powerful regional and sectoral mutual trade associations that, building on the German guild tradition, were established in law under the Social Code to be funded by mandatory employer contributions and governed by the social partners. As Hennock (2007) argues, the BGs solved the problem of funding worker sickness and disability benefits in a federal country where there was little state power to tax nationwide. Indeed, Bismarck—generally seen as the intellectual father of social insurance—favored central state administration of insurance but was forced to delegate control of the new scheme to the BGs due to the joint opposition of large industrial manufacturers, who preferred corporatist self-regulation, and the *Zentrumspartei*, which was strongly federalist (Mares, 2003, p. 85; Simons, 1984). Moreover, delegation to the BGs also fitted with 19th-century Prussian liberal state traditions that favored a coordinating role for the state over direct intervention (Huber, 2009). Bismarck—a vociferous opponent of state interference in business affairs and frustrated with party politics—accepted BG control over social insurance as a compromise (Hennock, 2007, p. 93).

That preference for corporatist action created a financial challenge in sustaining welfare provision without the deep pockets and taxation powers of a national treasury. As strictly self-financing mutual organizations, the BGs needed powers both to internalize and limit compensation costs. As Mares (2001) has noted, the quid pro quo for compulsory participation by all employers who were collectively liable for replacing the wages and other costs incurred by injured workers was to create the BGs as para-public bodies with strong regulatory powers for accident prevention.

The BGs exercise this regulatory authority in three ways. First, they were given legal powers to create detailed “accident prevention rules,” which to this day are fleshed out by corporatist technical committees in formidably large and dense rule books that are used by Länder Labor Inspectorates and the courts when assessing legal compliance and imposing any administrative law sanctions on violators (Rothstein et al., 2017). Second, to incentivize accident prevention the BGs set premiums that can vary considerably dependent on the riskiness of the sector, individual firms' accident record and inspection rating history (Paul & Huber, 2015). Third, in the context of mandatory membership, mutualist BGs were authorized to create their own technical inspectorates, which operate in parallel to Länder Labor inspectorates to combat moral hazard by BGs members and provide training and expert advice about regulatory compliance. BGs undertake approximately twice the number of inspections as their statutory counterparts (DGUV, 2013; Länderausschuss für Arbeitsschutz und Sicherheitstechnik, 2014) and have similar powers to issue fines and enforcement orders. Indeed, some—notably employer associations—have even questioned the necessity of Länder inspectorates (Gerlinger, 2000), reflecting the longstanding hold of corporatist regulation in Germany.

In Germany, therefore, the joint venture of a conservative welfare state tradition focused on social stability with an otherwise liberal state tradition focused on the avoidance of state intervention, and the resulting delegation to sectoral actors helped fashion an institutional structure that involved close complementarities between preventive regulation and social insurance. As Hennock (2007, p. 99)

has argued, “safety measures whose costs could not be justified by clearly foreseeable savings in compensation payments were ruled out from the beginning.” These days, BGs make three-way trade-offs between the safety of workers, the costs of compensation payouts borne by the BGs, and the competitive and other burdens of preventative safety measures agreed through tripartite corporatist negotiations (Ayaß, 2012; Paul & Huber, 2015). Moreover, compensation concerns have sometimes inhibited BGs from recognizing the occupational cause of certain diseases, as highlighted by a recent struggle over compensating for lung damage in aircrew due to so-called fume events in airplanes (Berndt & Ludwig, 2018).

4.2 | France

France also has a dual system for regulating OHS but in keeping with France's more dirigiste traditions, the state plays a more dominant and less complementary role to the social insurance system. France's regulatory regime emerged with the 1893 Industrial Establishments Act, which required employers to provide “clean and safe working conditions.” As in Germany, this broad goal was not judiciable until the 1980s (Chaumette, 1992, pp. 19, 25). Unlike Germany, however, the goal was fleshed out through a complex system of parallel statutory and nonstatutory regulations. Statutory regulations are set out by the Ministry of Labor in the form of an accumulating mass of detailed and inflexible rules in the Labor Code. These rules are enforced, using conventional administrative law sanctions by the state's regionally based Labor Inspectorate—the DIRECCTE—as part of their general duties to enforce all the other employment rights and provisions of the Labor Code. Alongside this statutory regime, however, the French social insurance system also operates its own parallel quasi-regulatory regime of rule setting and inspection, which are described later.

The social insurance system's role in accident prevention dates from the 1898 Workmen's Compensation Act, which—like Germany—replaced the civil liability of employers with a no-fault liability approach that used mandatory employer contributions to compensate workers generously for all income and medical costs of work-related injuries, illness, and death (Kangas, 2010; Parsons, 2002). Workers' compensation was initially provided through highly fragmented and uneven private firm-level arrangements and national, regional, and sectoral mutual associations—the *Caisses*—but was made more consistent and universal when it was absorbed into the new French social security system in 1946 as part of a wider shift toward “compulsory and centralized social policy” overseen by a much stronger state fulfilling its constitutional commitments to the republican principles of *égalité* and *fraternité* (Mares, 2003, p. 193). However, these reforms undermined the insurance logic of France's formally mutualist system of workers' compensation. Employer resistance to losing control over sectoral funds while still collectively liable for their costs resulted in an uneasy compromise that extended social security benefits to workers not covered by sectoral accident prevention agreements, but left sectoral *Caisses* in control of premiums and other insurance conditionalities (Mares, 2003, p. 209f). In turn the state now underwrites sometimes chronic gaps between *Caisses* compensation costs and premium income; *Mutualité Sociale Agricole* alone covers just under 10% of the population, but its income from premiums accounts for barely 35% of its payout costs (Pawlowska-Tyszko, Podstawka, Lelong, & Filipek-Kaźmierczak, 2013).

The problem facing the *Caisses* was that the cost-control imperatives of their Bismarckian system of workers' compensation clashed with the French Republican state tradition in which the state is the formal guarantor of the general interest. It was, therefore, the state's duty to make OHS regulations rather than the *Caisses*, whose financial sustainability depended on the rules of a statutory Labor Code it played no part in formulating (cf. Mares, 2003). However, the sheer complexity of making detailed rules to meet the extraordinary variety of situation-specific workplace problems has proved

to be beyond the Ministry of Labor, meaning that gaps and contradictions are inevitable. As the Ministry's own inspectorate has stated "The Law in practice is, by nature, not fully overlapping with the Law.... Full compliance with the law is aspirational" (DIRECCTE, 2012).

The *Caisses* have compensated for these problems in three ways (Cour des Comptes, 2002; HSE, 1996). First, they issue their own detailed and sectorally specific "accident prevention" rules, which are overseen by the *Caisses*' own technical inspectorates who can offer expert advice on compliance. Second, like Germany, the *Caisses* can also adjust premiums to reflect the so-called "cost of risk", dependent on compensation costs by sector and/or particular businesses and, following their inspectorates' advice, increase contribution rates by 25% for noncompliance with accident prevention rules. Third, reflecting the republican commitments to *fraternité*, the *Caisses* can even subsidize workplace improvements.

The result is a complex and contradictory layering of organizational responsibilities for OHS regulation in France. While the *Caisses* have a less formal regulatory role in accident prevention than the BGs in Germany, in practice they exert significant influence over workplace health and safety alongside a more strongly prevention-oriented state administration. Also, like the BGs, the *Caisses*' role as regulators of workplace health and safety follows, as Rivest (2002, p. 90) has argued, a "logic of compensation" rather than simple safety improvement. Thus, as in Germany, they have been criticized for delays in recognizing certain occupational diseases, most notably asbestos-related mesothelioma, which became a major public scandal in France in the 1990s (Rivest, 2002, p. 101).

4.3 | United Kingdom

In contrast to the dual systems of Germany and France, the United Kingdom relies almost entirely on statutory OHS regulation and policing, which is organizationally detached from its Beveridgean health and welfare system for ensuring the social security of injured workers and other citizens. The regulatory regime was founded on the 19th-century Factory Acts, which evolved in an ad hoc and reactive way over the course of the 20th century. Indeed, as long ago as 1910, Sidney Webb described the regime as a "typical example of English practical empiricism. We began with no abstract theory of social justice or the rights of man.... Each successive statute [was just] aimed at remedying a single ascertained evil" (Hutchins & Harrison, 1966, preface). By the 1960s, the regulatory regime had evolved into an infamously prescriptive but gap-laden system whose rules-based approach left millions of workers facing inconsistent and often inadequate levels of protection (Robens, 1972). In response to political pressure from both organized labor and business about the toll of occupational injury (Sirrs, 2016), the 1974 Health and Safety at Work Act abandoned detailed rules in favor of a principles-based approach to standard setting, simply requiring that workers should not face unreasonable levels of risk from *any* hazard in *any* sector, whether or not anyone was actually harmed. Regulations are enforced using a "risk-based" enforcement pyramid of criminal law sanctions by powerful expert inspectors who are employed by local authorities and the Health and Safety Executive (HSE), a dedicated national regulatory agency created under the 1974 Act (Demeritt, Rothstein, Beaussier, & Howard, 2015).

Compensation arrangements to cover workers' lost income and medical costs have played no role in shaping the regulatory regime for preventing workplace accidents and ill-health. To supplement, rather than replace, the existing weak tort regime, the 1897 Workers' Compensation Act imposed a no-fault duty on employers to pay for work-related accident and sickness costs for a range of industries (Lewis, 2012). The compensation regime was extended to all workplaces by the 1911 National Insurance scheme, which was administered by state "approved" mutual associations that were jointly funded by state and mandatory employer and employee contributions but without regard to the

riskiness of individual workplaces (Hennock, 2007). After WWII, the regime was “nationalized” through the Beveridge reforms with injury costs and treatments socialized through a universal system of general taxpayer-funded disability benefits, a limited industrial injuries compensation scheme (IIS) and the new National Health Service (NHS). Unlike France and Germany, tort was also retained to replace lost income and pay for enhanced care costs above the increasingly residualized benefits provided by the Beveridgean social security system.

In that Beveridgean welfare provision context, OHS regulation in the United Kingdom has not faced the same problems of internalizing disability benefit and health-care costs faced by Germany and France. With workplace accidents and ill-health accounting for just a small part of their total costs, the tax-payer funded disability benefits regime and its famously “free at the point of delivery” NHS have little financial incentive and no effective levers for influencing employers to improve occupational health and safety. Instead, the state has controlled costs by limiting victim benefits—that is, disability benefits and industrial compensation scheme awards—to residual income replacement levels (Gal, 2004; Kangas, 2010), and, since 1990, has deducted costs for benefits and medical treatment from successful tort awards (Parsons, 2002). While tort might have some disciplining effect on employers, insurance premiums account for only 0.25% of national payroll and only half of employers employ enough workers to be rated according to their accident record (Lewis, 2012). That means that the principal pressure on employers to reduce workplace accidents and ill-health comes not so much from efforts to contain their own compensation costs—unlike in Germany and partially France—but rather from a strong statutory regulatory regime, which operates only according to a logic of prevention.

4.4 | The Netherlands

Like the United Kingdom, the Netherlands also principally relies on statutory regulation and policing to prevent occupational injuries and sickness (de Gier, 1992; Popma, Schaapman, & Wilthagen, 2002), though recent welfare reforms have seen it introduce some limited insurance incentives for injury prevention. The Dutch regime for OHS regulation was founded on the 1895 Safety at Work Act, which steadily expanded over the century to cover all sectors through a complex mixture of prescriptive statutory and nonstatutory OHS rules and guidance formulated with advice from trade unions and sectoral associations (de Gier, 1992). Regulations are enforced by a state Labor Inspectorate using a conventional enforcement pyramid of administrative law sanctions to ensure compliance with OHS rules as well as with minimum wage laws and other labor market regulations, as in France and Germany. Recent reforms have sought to introduce a more proportionate and targeted approach to OHS by replacing prescriptive statutory regulation with various nonstatutory “Labor Catalogues” (Stichting van de Arbeid, 2007). Developed jointly by employer and employee associations, they provide sectorally specific advice on safety regulation and are given strong weight as evidence of compliance by the state inspectors and by the courts on those very rare occasions that safety disputes are not resolved informally, as is more typical of Dutch enforcement practice (Aalders & Wilthagen, 1997; Van Waarden & Hildebrand, 2009).

The Dutch welfare system combines elements of Beveridgean universalism, including a flat rate old-age pension and statutory individual health insurance, with Bismarckian arrangements for providing income-related sickness and disability benefits through sectorally mutualized social insurers (Cox, 1993). Despite its mutualist funding and corporatist organization, the Dutch social insurance regime, unlike its German and French counterparts, was not involved in preventative OHS regulation. The 1901 Work Accidents Act prohibited civil litigation in favor of income-replacing disability pensions funded through voluntary employer contributions to a set of mutual insurance associations—

the *Bedrijfsverenigingen*—jointly controlled by employer associations and trade unions. But unlike the BGs in Germany and the *Caisses* in France, the Dutch *Bedrijfsverenigingen* were limited to administering the disability payment system; they played no role in setting OHS standards or inspecting companies to calibrate premiums or provide technical advice on safety compliance (Popma et al., 2002). Over the century, the scheme expanded from covering only a small number of hazardous industries to eventually providing income-replacing pensions for all workers rendered incapable—whether through occupational injury or other cause—of continued employment (Parsons, 2002). Disability pensions are funded through flat-rate payroll taxes and mandatory contributions from business set on a sectoral basis rather than firm-level risk rating, on the grounds that differentiation would undermine the Dutch “polder” principle of solidarity. As Popma et al. (2002, p. 181) explain, Dutch welfare provisions “originated largely from Christian forms of charity and mutual and professional arrangements” and so “remained immune to any instrumentalist policies for a very long time.”

Without insurance instruments for controlling moral hazard, the *Bedrijfsverenigingen* were vulnerable to their members externalizing the costs of firm-level restructuring onto the mutualist funds. During the 1970s and early 1980s, the number of workers receiving disability pensions more than doubled, peaking at nearly 20% of the workforce, prompting reforms to the welfare system to combat what became known as the “Dutch disease” (Aarts & de Jong, 1996; Burkhauser, Daly, & Jong, 2008). Tort was reintroduced, benefits were cut, eligibility conditions were tightened, and the *Bedrijfsverenigingen* were incorporated into the Social Security Agency (UWV) to ensure their financial sustainability. At the same time, employer copayments of disability costs and “experience-rated” premiums were introduced to discourage firms from using disability pensions as an alternative to redundancy. But with no basis for distinguishing occupational injury from other causes of disability and the degree of disability defined socially “as a worker’s particular incapacity to find a job similar to his former job” (Hemerijck, 2003, p. 57), these insurance measures focused on controlling all welfare costs rather than incentivizing OHS per se.

The principal mechanisms for OHS regulation in the Netherlands have remained statutory, despite further attempts to coordinate the regulatory system more closely with the social security system. Thus, the Labor Inspectorate was recently merged with the Social Security Inspectorate to clamp down on fraudulent disability claims and the UWV is now consulted over the corporatist Labor Catalogues so that accident prevention rules take some account of welfare costs (Rothstein et al., 2017). These limited reforms, however, do not seem prone to fundamentally shift the logic of OHS regulation from prevention to the insurance-based one of cost control through internalization.

5 | DISCUSSION

Comparing the four countries, OHS regulatory outputs vary in two distinctive ways (see Table 1). First, instrument preferences for ensuring compliance vary across countries, involving different balances between state regulatory sanctions and the financial levers of tort, insurance premiums, and conditionality. Second, the organization of responsibilities for preventative regulation and its enforcement also vary between state and nonstate actors.

Thus, in Germany, OHS is principally governed by the mutual insurance associations (BGs) using financial levers of insurance to incentivize workplace safety. These private financial instruments are supplemented by detailed regulatory rules, which BGs set and enforce with their own expert inspectorates. That leaves the generalist state *Länder* labor inspectorates with a residual police function to

TABLE 1 National differences in the organization of responsibilities for preventative OHS regulation and instrument preferences for ensuring compliance

	Responsibilities for OHS regulation		Instruments for ensuring OHS compliance	
	Nonstate	State	Private financial instruments	Legal sanctions
Germany	Rules formulated by social insurance BGs with own inspectorates to promote compliance	Enabling legislation and policing to support BG self-regulation	Risk-based premiums as well as fines, insurance conditionalities, and other sanctions issued by BG inspectorates	Administrative law sanctions to deter noncompliance with BG rules
France	Private accident prevention rules formulated by social insurance <i>Caisses</i> with own inspectorates to promote compliance	Detailed provisions of statutory labor code enforced by generalist labor inspectorate	Risk-based premiums and insurance conditionalities supplemented by <i>Caisses</i> investment to improve safety of dangerous facilities	Administrative law sanctions for labor law violations
United Kingdom	None	Statutory regulations enforced by dedicated and technically expert government inspectors	Limited tort and private insurance incentives	Conventional enforcement pyramid backed by criminal law sanctions
Netherlands	Nonstatutory labor catalogues formulated by sectoral associations and trade unions	Statutory regulations enforced by generalist labor inspectorate; Social Security Administration a consultee on nonstatutory labor catalogues	"Experience-rated" premiums based on disability claims history; limited tort	Conventional enforcement pyramid backed by administrative law sanctions

further deter noncompliance with the same set of BG rules. In France, the mutualist *Caisses* also govern OHS through financial levers of insurance that incentivize compliance with detailed safety rules that the *Caisses* themselves also set and reinforce through technical advice, financial support, and if necessary, financial penalties issued by their own expert inspectors. In contrast to Germany, however, that corporatist social insurance regime operates in parallel to a separate statutory regime with its own voluminous regulatory rules set out in a proscriptive state Labor Code and that is only enforced by a generalist state labor inspectorate.

By contrast, in the United Kingdom, OHS regulation is entirely statutory and enforced by a muscular OHS inspectorate, supplemented by some limited financial incentives on employers through tort and private insurance. Historically, OHS regulation in the Netherlands was very similar, with statutory regulation enforced by a state labor inspectorate, although recent welfare reforms have seen those traditional arrangements supplemented by the introduction of new insurance conditionalities for disability benefits, while statutory regulation is being supplemented by various industry specific Labor Catalogues formulated by the social partners.

These distinctive patterns of national preferences for the use of financial versus regulatory instruments and the allocation of regulatory responsibilities between state and nonstate actors have been relatively stable over the course of a century. This stability is perhaps unsurprising given that preventative regulation and welfare regimes to look after injured and sick workers have long been a universal prerequisite for relative industrial peace and predictable business and legal environments for all

developed capitalist societies. However, the relative stability of these arrangements does suggest that the regulatory state—when it comes to OHS at least—is neither supplanting the welfare state nor is the regulatory state simply compensating for welfare state retrenchment in times of austerity. Moreover, the sheer longevity of these arrangements—surviving world wars and huge changes in the character of capitalist production and services—suggests that regulatory outputs are not simply a matter of contingent policy choices, shaped, for example, by the balance of power of organized lobbies or changing governments. Certainly, the precise stringency of individual regulatory interventions at any one time might be best explained by the relative power and mobilization of labor and business organizations (Demeritt et al., 2015; Paul & Huber, 2015). Moreover, our analysis is consistent with prominent critiques of historical institutionalism (cf. Peters et al., 2005; Pontusson, 1995) insofar as the formative periods of regulatory and compensation approaches in OHS have been shaped by political struggles between different interests and coalitions (see our debate about Bismarck's struggle with the *Zentrumspartei* over a centralized vs. a sectoral-corporatist compensation regime). Yet, given the transitory character of political coalitions in each country, their variation seems to have little explanatory power for the *longue durée* patterns of interaction between regulation and compensation, that we have identified.

Instead, our findings suggest that the patterns of instrument preferences and organization of regulatory responsibility are best explained by two key variables, or—as Guidi et al. (2020) would term them—regulatory “inputs.” The first variable concerns the model of welfare state provision insofar as Bismarckian welfare state models involve distinct challenges of cost control and internalization that favor different instrument preferences and allocations of regulatory responsibility to Beveridgean systems founded on universalism and funded by general tax revenues. The second variable concerns broader state traditions, insofar as the countries vary significantly in the normative underpinnings of regulatory action by the state. This discussion examines each variable in turn, starting with the different welfare state models and the ways in which their distinct cost-control problems shaped OHS regulation.

Historically, all four countries started off with weak tort regimes that they either replaced or supplemented with very different models of welfare state provision for workers' compensation, whose cost-control logics influenced the evolution of OHS regulation in different ways. Bismarckian welfare states, having abolished tort in favor of no-fault compensation, needed to ensure the financial sustainability of the mutualist social insurance funds established to fund compensation by providing them with the means to internalize compensation costs and control moral hazard by their members. To solve that problem, the French and German funds have used variable premiums and conditionality—set, monitored, and enforced through their own inspectorates—to ensure coverage of what the French *Caisses* call the “cost of risk.” However, the effectiveness of financial levers to keep these mutual funds solvent and incentivize workplace safety is limited, not least because, as mutuals, each fund entails a degree of risk pooling and premiums are necessarily limited to keep them affordable, on both insurance grounds of risk spreading and in response to pressure from more cost-sensitive firms. Therefore, following the law and economics argument that moral hazard is best avoided when those bearing the costs of risk are also responsible for regulation to reduce it (Philipsen, 2009), both the German BGs and French *Caisses* sought to supplement purely financial incentives with their own industry-specific private regulatory standards and inspection to reduce accident burdens and protect their funds.

The cost-control problems facing Bismarckian social insurance regimes are powerfully illustrated by the Netherlands, which is the proverbial exception that proves the rule. Having abolished tort in favor of dedicated funds to pay disability benefits, the *Bedrijfsverenigingen* faced particularly high cost-control problems because—unlike their German and French counterparts—they did not use

premium variation or conditionality as financial levers to control moral hazard and contain compensation costs. These cost-control problems became clear during the economic downturn of the 1970s and 1980s when the “Dutch disease” of spiraling disability pensions forced sweeping welfare reform, including the incorporation of financially precarious *Bedrijfsverenigingen* into the state social security system, the merger of the labor and social security inspectorates, and the introduction of employer cost sharing and other insurance conditionalities.

By contrast, the United Kingdom's Beveridgean arrangements for workers' compensation do not require injury costs to be internalized through self-sustaining premiums because they are externalized to the state. Spreading the financial risks of occupational injury out among all taxpayers does create moral hazard problems but, as the costs of workplace harms are just one bad among many, they are relatively unimportant for overall welfare cost control. In the absence of incentives and the fiscal levers to pressure businesses to reduce the toll from occupational injury, and with the state unwilling to increase taxes, the way for liberal Beveridgean welfare systems to control their costs is by reducing benefits and increasing their conditionality, supplemented by weak pressure from tort and associated employer private insurance. It is these market failures, more than the moral hazard involved in the Beveridgean welfare state supporting workers and businesses taking unreasonable risks in pursuit of higher wages and profits, that favor the governance of workplace safety through strong statutory preventative regulation.

Welfare state arrangements, therefore, create a set of distinct logics around cost control, which take us a long way in explaining national variation in instrument preferences and allocation of regulatory responsibilities. Welfare states with Bismarckian insurance systems—exemplified by Germany—need closely coordinated regulatory interventions to supplement their financial levers for controlling costs, which one might expect to be best handled by the funds themselves. By contrast, in systems where compensation costs are socialized—such as in the United Kingdom—financial incentives play only a minor role in ensuring compliance; in the absence of a strong tort system, there is a need for strong preventative regulation to correct market failure. However, the cost-control logics of specific welfare state models can explain neither why France developed a parallel complex system of state regulation, nor why the Dutch disability benefits funds eschewed financial levers for incentivizing accident prevention and neither set nor enforced their own preventative regulations.

Those residual questions are best explained by a second variable of wider state norms and traditions of action. European regulatory state traditions vary significantly in their degrees of state centeredness, which may complement or conflict with the instrument preferences and organization of regulatory responsibility favored for solving the distinctive cost-control problems posed by their welfare state models. Thus, in Germany's Bismarckian welfare state, the need for close coordination between the BGs and preventative regulation fitted both with the Prussian liberal state tradition, which favored solutions by economic actors over direct state intervention, as well as with the difficulties of imposing nationwide solutions on a strongly federal country. The result is a relatively coherent and self-contained regime where both compensation and preventative regulation are managed in a mutually supportive manner by the BGs, as they acknowledge in the opening quote of this article. The United Kingdom is also relatively coherent insofar as the need for statutory regulation to counterbalance weak financial levers for endogeneously incentivizing OHS fits with a pragmatic state tradition that regulates in an ad hoc fashion to address market failures as they arise. In that context, the British approach to OHS regulation responded to political, rather than financial, demands from both employees wanting safe workplaces and employers wanting legal predictability and a level playing field.

In the Netherlands and France, the relationship between the welfare provision and OHS regulation is less coherent, because the regulatory demands of their welfare state models clashed with their

particular state traditions. Thus, in the Netherlands, the sustainability of Bismarckian provisions for workers' compensation required fiscal levers for internalizing costs and controlling moral hazard that were incompatible with an ethic of universality and noninstrumentality that derived from a state tradition of "polder politics," solidarity, and social cohesion (Popma et al., 2002). That conflict did provoke some changes to both welfare provision and OHS regulation in an attempt to reduce incoherence but the scope for reform has been limited.

The tensions in France were different from the Netherlands, however, insofar as the need for greater coordination between preventative OHS regulation and its Bismarckian provisions for workers' compensation to ensure cost control and internalization conflicted with Republican ideals of the *dirigiste* state as guarantor of the general interest. The result was two overlapping and inconsistent sets of statutory and private insurance rules and two separate inspectorates to enforce them, which has predictably resulted in significant problems. Indeed, that story points to important roots of what the VoC literature on mixed market economies (Rothstein et al., 2017; Thatcher, 2007), claims is a diagnostically French (and Southern European) coordination problem between corporatist actors and the state.

6 | CONCLUSIONS

This study highlights a need to go beyond discussions of whether the regulatory state is supplanting the welfare state, is its functional equivalent, or is coming to its rescue. Instead, a comparative examination of the evolution of OHS regulation alongside workers' compensation indicates that while the organization and instruments of welfare provision and regulatory control vary considerably across countries, the fundamental relationships between welfare provision and regulatory control—in terms of the division of who does what and how—have been relatively stable for over a century. Indeed, the article's key argument is that the balance of financial versus regulatory instrument preferences and the allocation of regulatory responsibilities for governing OHS between state and nonstate actors depends on boundary conditions that are shaped by systems of welfare provision and wider state traditions.

Thus, cost-control logics in Bismarckian welfare systems favor the use of financial instruments supplemented by closely coordinated preventative regulation, while in liberal Beveridgean systems, preventative statutory regulation is more or less the only available game in town. At the same time, the balance of instrument preferences and allocation of regulatory responsibilities are also shaped by the extent to which the cost-control logics of welfare provision are coherent with the norms and traditions of state action. Thus, the cost-control logics of Germany's Bismarckian social insurance regime are coherent with state traditions that favor subsidiarity of regulatory controls to the funds, while the United Kingdom's Beveridgean welfare provision aligns neatly with state traditions that favor regulation by the central state. By contrast, the cost-control logics of Bismarckian social insurance is at odds with the state traditions of the other two countries. In France, such logics are in conflict with *dirigiste* state traditions, while in the Netherlands they struggle with noninstrumentalist philosophies of voluntarist consociationalism.

More research is needed to assess the generalizability of our findings to the welfare systems and state traditions of other countries. The United States, for example, abolished tort a century ago in favor of complex worker compensation schemes that vary across states, that layer up with other welfare regimes, and work in parallel with Federal regulation, which is typically constrained by judicial challenge. Conventional explanations for well-known weaknesses in rule making and enforcement tend to concentrate on the superior firepower of business over labor interests, but our analysis suggests that in

such a fragmented system it is not surprising that organized labor tends to focus on compensation payouts rather than much harder to achieve regulatory change (Hirsch, Macpherson, & DuMond, 1997). Indeed, more generally, the findings of this article point to how the politics of OHS, in at least all developed capitalist societies, is liable to be shaped and constrained by these deep and long-established, but country-specific, institutional logics.

Likewise, research on other policy domains could establish whether OHS is a special case—having stood at the cradle of both the welfare state and social regulation—or whether institutional complementarities in this domain apply more widely. Disaster governance is one possible domain, insofar as the organization and instrument preferences of preventative regulation are likely to be sensitive to national arrangements for disaster insurance and emergency relief, given the tendency for relief to promote moral hazard and for structural flood prevention to contribute to a “levee effect” of rising loss potential.

Such further research tasks pending, this study will have achieved its aim if the institutional interdependencies between the fiscal compensation models of different welfare states and the prevention efforts of different regulatory states, as well as the outcomes of such linkages, feature more prominently in comparative governance research.

ACKNOWLEDGMENTS

This research was funded under the Open Research Area (ORA) for the Social Sciences program by the Economic and Social Research Council (No. ES/K006169/1), the Agence Nationale de la Recherche (ANR, France), Deutsche Forschungsgemeinschaft (DFG, Germany), and the Nederlands Organisatie voor Wetenschappelijk Onderzoek (NWO, Netherlands). We would like to thank our project collaborators Anne-Laure Beaussier, Olivier Borraz, Marijke Hermans, Michael Huber, Vera Linke, and Mara Wesseling for their valuable comments. We benefited from stimulating discussions in a workshop organized by the editors of this special issue during the ECPR Joint Sessions in Nottingham in 2017, and are grateful for constructive feedback from workshop participants. We also acknowledge the helpful comments by three anonymous referees.

ENDNOTE

¹To ensure readability, we largely refrain from quoting primary documents and interviews, but details can be supplied on request.

REFERENCES

- Aalders, M., & Wilthagen, T. (1997). Moving beyond command-and-control: Reflexivity in the regulation of occupational safety and health and the environment. *Law & Policy*, 19(4), 415–443.
- Aarts, L., & de Jong, P. (Eds.). (1996). *Curing the Dutch disease: An international perspective on disability policy reform*. Ashgate: Brookfield.
- Adam, C., Hurka, S., & Knill, C. (2017). Four styles of regulation and their implications for comparative policy analysis. *Journal of Comparative Policy Analysis: Research and Practice*, 19(4), 327–344.
- Ayaß, W. (2012). Regulierte Selbstregulierung in den Berufsgenossenschaften der gesetzlichen Unfallversicherung. In P. Collin, G. Bender, S. Ruppert, M. Seckelmann, & M. Stolleis (Eds.), *Moderne Regulierungsregime: Regulierte Selbstregulierung im frühen Interventions und Sozialstaat* (pp. 123–143). Frankfurt am Main: Klostermann.
- Bailey, I. (2007). Market environmentalism, new environmental policy instruments, and climate policy in the United Kingdom and Germany. *Annals of the Association of American Geographers*, 97(3), 530–550.
- Berndt, C., & Ludwig, J. (2018). Das Kartell. *Süddeutsche Zeitung*, 26(5), 2018.

- Brickman, R., Jasanoff, S., & Ilgen, T. (1985). *Controlling chemicals: The politics of regulation in Europe and the United States*. Ithaca, NY: Cornell University Press.
- Burkhauser, R., Daly, M., & Jong, D. (2008). *SSRN Electronic Journal*. Curing the Dutch disease: Lessons for United States disability policy. <https://doi.org/10.2139/ssrn.1337652>
- Castles, F., Leibfried, S., Lewis, J., Obinger, H., & Pierson, C. (Eds.). (2010). *The Oxford handbook of the welfare state*. Oxford, England: Oxford University Press.
- Chaumette, P. (1992). France. In R. Baldwin & T. Daintith (Eds.), *Harmonization and hazard* (pp. 19–45). London: Graham and Trotman.
- Cour des Comptes. (2002). *La gestion du risque accidents du travail et maladies professionnelles*. Paris: Fevrier.
- Cox, R. (1993). *The development of the Dutch welfare state: From workers' insurance to universal entitlement*. Pittsburgh, PA: University of Pittsburgh Press.
- de Gier, E. (1992). The Netherlands. In R. Baldwin & T. Daintith (Eds.), *Harmonization and hazard* (pp. 133–165). London: Graham and Trotman.
- Demeritt, D., Rothstein, H., Beaussier, A.-L., & Howard, M. (2015). Mobilizing risk: Explaining policy transfer in food and occupational safety regulation in the UK. *Environment and Planning A*, 47, 373–391.
- Deutsche Gesetzliche Unfallversicherung. (2010). 125 Jahre gesetzliche Unfallversicherung. Das Geheimnis eines langen Lebens. *DGVU Forum*, 2010(7–8), 11–15.
- DIRECCTE. (2012). *Le travail vivant des agents de contrôle de l'inspection du travail. Etude menée en Ile-de-France (2009–2012)*, Paris.
- Ebbinghaus, B. (2015). The privatization and marketization of pensions in Europe: A double transformation facing the crisis. *European Policy Analysis*, 1(1), 56–73.
- Emmenegger, P. (2011). Job security regulations in Western democracies: A fuzzy set analysis. *European Journal of Political Research*, 50(3), 336–364.
- Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton, NJ: Princeton University Press.
- Estevez-Abe, M., Iversen, T., & Soskice, D. (2001). Social protection and the formation of skills: A reinterpretation of the welfare state. In P.A. Hall & D. Soskice (Eds.), *Varieties of capitalism. The institutional foundations of comparative advantage* (pp. 145–183). Oxford, England: Oxford University Press.
- Fishback, P. (2000). *A prelude to the welfare state: The origins of workers' compensation*. Chicago, IL: University of Chicago Press.
- Gal, J. (2004). Decommodification and beyond: A comparative analysis of work-injury Programmes. *Journal of European Social Policy*, 14(1), 55–69.
- Gerlinger, T. (2000). *Arbeitsschutz und europäische Integration : europäische Arbeitsschutzrichtlinien und nationalstaatliche Arbeitsschutzpolitik in Großbritannien und Deutschland*. Opladen: Leske+Budrich.
- Guidi, M., Guardiancich, I., & Levi-Faur, D. (2020). Modes of regulatory governance: A political economy perspective. *Governance*, 33(1), 5–19.
- Guyton, G. P. (1999). A brief history of workers' compensation. *Iowa Orthopaedic Journal*, 19, 106–110.
- Haber, H. (2011). Regulating-for-welfare: A comparative study of “regulatory welfare regimes” in the Israeli, British, and Swedish electricity sectors. *Law & Policy*, 33(1), 116–148.
- Haber, H. (2017). Rise of the regulatory welfare state? Social regulation in Utilities in Israel. *Social Policy & Administration*, 51(3), 442–463.
- Hall, P. A., & Soskice, D. (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford, England: Oxford University Press.
- Hay, C., & Wincott, D. (2012). *The political economy of European welfare state capitalism*. Basingstoke: Palgrave MacMillan.
- Health and Safety Executive. (1996). *The regulation of health and safety in five European countries*. London: Author.
- Hemerijck, A. (2003). The resurgence of Dutch corporatist policy coordination in an age of globalization. In F. van Waarden & G. Lehmbruch (Eds.), *Renegotiating the welfare state: Flexible adjustment through corporatist concertation* (pp. 33–69). London: Routledge.
- Hennock, E. (2007). *The origin of the welfare state in England and Germany, 1850–1914: Social policies compared*. Cambridge, England: Cambridge University Press.
- Hirsch, B., Macpherson, D., & DuMond, J. (1997). Workers' compensation Reciprocity in union and nonunion workplaces. *Industrial and Labor Relations Review*, 50(2), 213–236.
- Huber, P. (2009). Risk decisions in German constitutional and administrative law. In G. R. Woodman (Ed.), *Risk and the law* (pp. 23–35). London: Routledge-Cavendish.
- Hutchins, B., & Harrison, A. (1966). *A history of factory legislation* (3rd ed.). London: Routledge.
- Kagan, R. (2000). Comparing national styles of regulation in Japan and the United States. *Law and Policy*, 22(3–4), 225–244.
- Kangas, O. (2010). Work accident and sickness benefits. In F. Castles, S. Leibfried, J. Lewis, H. Obinger, & C. Pierson (Eds.), *The Oxford handbook of the welfare state*. Oxford, England: Oxford University Press.
- Kelman, S. (1981). *Regulating America, regulating Sweden: A comparative study of occupational safety and health policy*. Cambridge, MA: MIT Press.
- Länderausschuss für Arbeitsschutz und Sicherheitstechnik. (2014). *Überwachungs- und Beratungstätigkeit der Arbeitsschutzbehörden der Länder—Grundsätze und Standards*.

- Leisering, L. (2011a). *The new regulatory state: Regulating pensions in Germany and the UK*. London: Palgrave Macmillan.
- Leisering, L. (2011b). The regulatory policies of private pensions in the UK and Germany: Goals and instruments of regulation in a welfare state environment. In L. Leisering (Ed.), *The new regulatory state: Comparing the UK and Germany* (pp. 211–232). London: Palgrave Macmillan.
- Levi-Faur, D. (2014). The welfare state: A regulatory perspective. *Public Administration*, 92(3), 599–614.
- Lewis, R. (2012). Employers' liability and workers' compensation: England and Wales. In K. Oliphant & G. Wagner (Eds.), *Employers' liability and workers' compensation* (pp. 137–202). Vienna: Walter de Gruyter.
- Mabbett, D. (2010). *The regulatory rescue of the welfare state* (Working Paper No. 28). Jerusalem.
- Mahoney, J., & Thelen, K. (Eds.). (2015). *Advances in comparative-historical analysis*. New York: Cambridge University Press.
- Majone, G. (1994). The rise of the regulatory state in Europe. *West European Politics*, 17(3), 77–101.
- Majone, G. (1997). From the positive to the regulatory state: Causes and consequences of changes in the mode of governance. *Journal of Public Policy*, 17(2), 139–167.
- Mares, I. (2001). Firms and the welfare state: When, why, and how does social policy matter to employers? In P.A. Hall & D. Soskice (Eds.), *Varieties of capitalism. The institutional foundations of comparative advantage* (pp. 184–212). Oxford, England: Oxford University Press.
- Mares, I. (2003). *The politics of social risk: Business and welfare state development*. Cambridge, England: Cambridge University Press.
- Meckling, J., & Jenner, S. (2016). Varieties of market-based policy: Instrument choice in climate policy. *Environmental Politics*, 25(5), 853–874.
- Moran, M. (2002). Understanding the regulatory state. *British Journal of Political Science*, 32(2), 391–413.
- Parsons, C. (2002). Liability rules, compensation systems and safety at work in Europe. *Geneva Papers on Risk & Insurance*, 27(3), 358–382.
- Paul, R., & Huber, M. (2015). Risk-based regulation in continental Europe? Explaining the corporatist turn to risk in German work safety policies. *European Policy Analysis*, 1(2), 5–33.
- Pawlowska-Tyszko, J., Podstawka, M., Lelong, P.-Y., & Filipek-Kaźmierczak, S. (2013). *The social insurance system for farmers and its impact on public finances*. Warsaw: IAFE.
- Peters, B. G., Pierre, J., & King, D. S. (2005). The politics of path dependency: Political conflict in historical institutionalism. *The Journal of Politics*, 67(4), 1275–1300.
- Philipsen, N. (2009). Compensation for industrial accidents and incentives for prevention: A theoretical and empirical perspective. *European Journal of Law and Economics*, 28(2), 163–183.
- Pontusson, J. (1995). From comparative public policy to political economy: Putting political institutions in their place and taking interests seriously. *Comparative Political Studies*, 28(1), 117–147.
- Popma, J., Schaapman, M., & Wilthagen, T. (2002). The Netherlands: Implementation within wider regulatory reform. In D. Walters (Ed.), *Regulating health and safety Management in the European Union*. Frankfurt/Main: Peter Lang.
- Posner, R. (1975). The economic approach to law. *Texas Law Review*, 53, 757–782.
- Reibling, N. (2010). Healthcare systems in Europe: Towards an incorporation of patient access. *Journal of European Social Policy*, 20, 5–18.
- Rhodes, R. (1996). Governing without government. *Political Studies*, 44(4), 652–667.
- Rivest, C. (2002). France: From a minimalist transposition to a full scale reform of the OHS system. In D. Walters (Ed.), *Regulating health and safety management in the European Union*. Frankfurt/Main: Peter Lang.
- Robens, A. (1972). *Safety and health at work*. London: H.M. Stationery Office.
- Rothstein, H., Borraz, O., & Huber, M. (2013). Risk and the limits of governance: Exploring varied patterns of risk-based governance across Europe. *Regulation & Governance*, 7(2), 215–235.
- Rothstein, H., Demeritt, D., Paul, R., Beaussier, A. L., Wesseling, M., Howard, M., ... Boudier, F. (2017). Varieties of risk regulation in Europe: Coordination, complementarity & occupational safety in capitalist welfare states. *Socio-Economic Review*. <https://doi.org/10.1093/ser/mwx029>
- Schröder, M. (2013). *Integrating varieties of capitalism and welfare state research: A unified typology of capitalisms*. Basingstoke: Palgrave Macmillan.
- Simons, R. (1984). *Staatliche Gewerbeaufsicht und gewerbliche Berufsgenossenschaften: Entstehung und Entwicklung des dualen Aufsichtssystems im Arbeitsschutz in Deutschland von den Anfängen bis zum Ende der Weimarer Republik*. Frankfurt am Main: Haag+Herchen.
- Sirrs, C. (2016). Accidents and apathy: The construction of the “Robens philosophy” of occupational safety and health regulation in Britain, 1961–1974. *Social History of Medicine*, 29(1), 66–88.
- Spitzenverband der Deutschen Gesetzlichen Unfallversicherung. (2013). *DGUV Statistiken für die Praxis 2013*, Berlin.
- Steinmo, S., Thelen, K., & Longstrech, F. (Eds.). (1992). *Structuring politics: Historical institutionalism in comparative analysis*. Cambridge, UK: Cambridge University Press.
- Stichting van de Arbeid (Labour Foundation). (2007). *What is a health and safety catalogue?* The Hague: Author.
- Thatcher, M. (2007). Reforming national regulatory institutions: The EU and cross-national variety in European network industries. In B. Hancké, M. Rhodes, & M. Thatcher (Eds.), *Beyond varieties of capitalism: Conflict, contradiction, and complementarities in the European economy* (pp. 147–171). Oxford, England: Oxford University Press.

- van Berkel, R., de Graaf, W., & Sirovátka, T. (Eds.). (2011a). *The governance of active welfare states in Europe*. New York: Palgrave Macmillan.
- van Berkel, R., de Graaf, W., & Sirovátka, T. (2011b). The governance of active welfare states in Europe in a comparative perspective. In R. van Berkel, W. de Graaf, & T. Sirovátka (Eds.), *The governance of active welfare states in Europe* (pp. 237–263). London: Palgrave Macmillan.
- van Waarden, F., & Hildebrand, Y. (2009). From corporatism to lawyocracy? On liberalization and juridification. *Regulation & Governance*, 3(3), 259–286.
- Vogel, D. (1986). *National styles of regulation: Environmental policy in Great Britain and the United States*. Ithaca, NY: Cornell University Press.
- Vogel, D., & Kagan, R. (2004). *Dynamics of regulatory change: How globalization affects national regulatory policies*. Berkeley: University of California Press.
- Wank, R. (1992). Germany. In R. Baldwin & T. Daintith (Eds.), *Harmonization and hazard* (pp. 49–76). London: Graham and Trotman.

How to cite this article: Rothstein H, Paul R, Demeritt D. The boundary conditions for regulation: Welfare systems, state traditions, and the varied governance of work safety in Europe. *Governance*. 2020;33:21–39. <https://doi.org/10.1111/gove.12411>